

Claims:

1. End user customizable computer spreadsheet application based expert system for providing information regarding an intent to produce at least one unit
5 of a finished product, the system comprising:
 - (a) at least one spreadsheet each with at least one end user editable spreadsheet block each relating to a particular class of an object and having:
 - i) at least one input spreadsheet cell each associated with an input
parameter selected by an end user from a plurality of input parameters,
 - 10 ii) at least one output spreadsheet cell each associated with an output
parameter selected by an end user from a plurality of output parameters,
and
 - iii) at least one spreadsheet script for receiving input values from at
least one input spreadsheet cell, computing output values of at least one
15 end user selected output parameter, and returning output values to their
associated output spreadsheet cells; and
 - b) a hard coded unification builder for selectively linking at least two
spreadsheet blocks in accordance with an input graph determined in accordance
with the intent to generate at least one unified spreadsheet enabling the chaining
20 of at least one production information item between a pair of its constituent
spreadsheet blocks.
2. The system according to claim 1 wherein said object relates to the
construction of finished products, and said unification builder links at least two
25 spreadsheet blocks in accordance with a product description graph logically
representing the finished product to generate at least one unified Intent To
Production (ITP) spreadsheet including at least one feasible production plan for
fulfilling the intent.

3. The system according to claim 2 wherein a spreadsheet block includes instructions for user prompts for assisting in the entry of an intent.
4. The system according to claim 1 wherein said object relates to resources available to produce finished products, and said unification builder links at least two spreadsheet blocks in accordance with a production flow graph of production processes starting from raw materials and terminating in the finished product to generate a unified estimation spreadsheet for fulfilling the intent.
5. The system according to claim 1 wherein a spreadsheet script defines an end user defined intermediate parameter having a computed value in accordance with a given set of input values which is capable of being manually overwritten by an end user.
6. The system according to claim 1 wherein the end user customizable computer spreadsheet application based expert system is designed for providing information regarding an intent for producing at least one unit of a printed finished product and is capable of receiving impositioning information regarding its printed components.
7. The system according to claim 6 wherein the end user customizable computer spreadsheet application based expert system includes a first spreadsheet block for modeling the production of paper components of a printed finished product, a second spreadsheet block for modeling the production of non-paper components of a printed finished product, and a third spreadsheet block for modeling the integrating of at least one paper component and/or at least one integrated component and/or at least one non-paper component.

8. Method of operation of an end user customizable computer spreadsheet application based expert system for providing information regarding the production of a product, the method comprising the steps of:

- 5 (a) providing at least one end user editable spreadsheet each with at least one spreadsheet block each relating to a particular class of an object and having:
- i) at least one input spreadsheet cell each associated with an input parameter selected by an end user from a plurality of input parameters,
 - ii) at least one output spreadsheet cell each associated with an output parameter selected by an end user from a plurality of output parameters,
 - 10 and
 - iii) at least one spreadsheet script for receiving input values from at least one input spreadsheet cell, computing output values of at least one end user selected output parameter, and returning output values to their associated output spreadsheet cells; and
- 15 (b) selectively linking at least two spreadsheet blocks in accordance with an input graph determined in accordance with the intent to generate at least one unified spreadsheet enabling the chaining of at least one production information item between a pair of its constituent spreadsheet blocks.

20 9. The method according to claim 8 wherein the object relates to the construction of finished products, and step (b) includes linking at least two spreadsheet blocks in accordance with a product description graph logically representing the finished product to generate at least one unified Intent To Production (ITP) spreadsheet including at least one feasible production plan for
25 fulfilling the intent.

10. The method according to claim 9 wherein a spreadsheet block includes instructions for user prompts for assisting in the entry of an intent.

11. The method according to claim 8 wherein the object relates to resources available to produce finished products, and step (b) includes linking at least two spreadsheet blocks in accordance with a production flow graph of production processes starting from raw materials and terminating in the finished product to
5 generate a unified estimation spreadsheet for fulfilling the intent.

12. The method according to claim 8 wherein a spreadsheet script defines an end user defined intermediate parameter having a computed value in accordance with a given set of input values which is capable of being manually overwritten
10 by an end user.

13. The method according to claim 8 wherein the end user customizable computer spreadsheet application based expert system is designed for providing information regarding an intent for producing at least one unit of a printed
15 finished product and is capable of receiving impositioning information regarding its printed components.

14. The method according to claim 13 wherein the end user customizable computer spreadsheet application based expert system includes a first spreadsheet
20 block for modeling the production of paper components of a printed finished product, a second spreadsheet block for modeling the production of non-paper components of a printed finished product, and a third spreadsheet block for modeling the integrating of at least one paper component and/or at least one integrated component and/or at least one non-paper component.

15. A distribution medium for distributing a computer program comprising instructions which, when executed by a computer, perform the steps of:
- (a) providing at least one end user editable spreadsheet block each relating to a particular class of an object and having:
 - 5 i) at least one input spreadsheet cell each associated with an input parameter selected by an end user from a plurality of input parameters,
 - ii) at least one output spreadsheet cell each associated with an output parameter selected by an end user from a plurality of output parameters, and
 - 10 iii) at least spreadsheet script for receiving input values from at least one input spreadsheet cell, computing output values of at least one end user selected output parameter, and returning output values to their associated output spreadsheet cells; and
 - b) providing a hard coded unification builder for selectively linking at least
15 two spreadsheet blocks in accordance with an input graph determined in accordance with the intent to generate at least one unified spreadsheet enabling the chaining of at least one production information item between a pair of its constituent spreadsheet blocks.
- 20 16. The medium according to claim 15 wherein said object relates to the construction of finished products, and said unification builder links at least two spreadsheet blocks in accordance with a product description graph logically representing the finished product to generate at least one unified Intent To Production (ITP) spreadsheet including at least one feasible production plan for
25 fulfilling the intent.
17. The medium according to claim 16 wherein a spreadsheet block includes instructions for user prompts for assisting in the entry of an intent.

18. The medium according to claim 15 wherein said object relates to resources available to produce finished products, and said unification builder links at least two resource spreadsheet blocks in accordance with a production flow graph of production processes starting from raw materials and terminating in the finished product to generate a unified estimation spreadsheet for fulfilling the intent.

19. The medium according to claim 15 wherein a spreadsheet script defines an end user defined intermediate parameter having a computed value in accordance with a given set of input values which is capable of being manually overwritten by an end user.

20. The medium according to claim 15 wherein the end user customizable computer spreadsheet application based expert system is designed for providing information regarding an intent for producing at least one unit of a printed finished product and is capable of receiving impositioning information regarding its printed components.

21. The medium according to claim 20 wherein the end user customizable computer spreadsheet application based expert system includes a first spreadsheet block for modeling the production of paper components of a printed finished product, a second spreadsheet block for modeling the production of non-paper components of a printed finished product, and a third spreadsheet block for modeling the integrating of at least one paper component and/or at least one integrated component and/or at least one non-paper component.